

## **VE/OSCR/PVBD-714 WORKSHOP**

### **Slide 1**

There are several programs for funding initiatives to reduce the operating and support (O&S) costs of Department of Defense (DOD) weapon systems. Also, there are many administrative and technical factors that must be addressed to accomplish this end. These administrative and technical factors were addressed in the other workshops. The VE/OSCR/PBD-714 Workshop team members agreed at the beginning of our workshop that all these factors should not be viewed as independent, disparate actions to accomplish several goals, but as interrelated and mutually supporting actions directed to a common goal. It was determined to use the Value Engineering (VE) methodology to define a process that could be used at all levels of DOD to accomplish the goal of modernizing fielded weapon systems by improving their performance and reducing O&S costs through the incremental improvement of spares. The first step in defining the process was a brief introduction to the concepts and techniques of VE to be used during the workshop. These were then applied to defining the process.

### **Slide 2**

Understanding of the problem/opportunity was provided by the Wednesday morning presentations and review of higher headquarters' directives on the subject. This information was used in our problem analysis as shown on this slide. From this problem analysis it was agreed that the common goal (which is defined by the VE methodology as the "Highest Order Function") to be accomplished by the process is to "Modernize Fielded System" and that the way to accomplish this (defined in VE as the "Basic Function") is to "Increase Secondary Items Value". It was also agreed that the requirement to modernize field systems is a response to the missions given to DOD. Subsequently, the initiating function (defined in VE as the "Lowest Order Function") is to "Define Mission". From this, four independent Integrated Product Teams (IPTs) brainstormed the Secondary Functions required to accomplish the Basic Function "Increase Secondary Items Value". These Secondary Functions were arranged into an interrelated hierarchy using a Function Analysis System Technique (FAST) diagram to show the process (in VE terms "Concept") to accomplish "Modernization Through Spares (MTS)".

### **Slide 3**

As you can see from the resulting FAST diagram, it is an excellent communications vehicle which uses a common language to cross all disciplines and technologies. It allows the multi-disciplined IPT members to contribute equally and communicate with one another while addressing the problem objectively without bias or preconceived conclusions. It is also an excellent planning tool and way to present complex concepts in a logical business case form to senior management.

As shown, "Value" is a function of two measurable variables, "Performance" and "Life Cycle Costs", i.e., value increases as a weapon system's performance is improved and/or life cycle costs are reduced. The functions to the right of "Improve Performance" and "Reduce Life Cycle Costs" show the methods to accomplish these functions. This is the process to be followed at any level within DOD to modernize fielded weapon systems through the incremental improvement of spares (i.e., secondary items).

#### **Slide 4**

The next step was to use a sensitivity matrix to identify the type-organization responsible for each function and the type-organizations affected by the methods selected to accomplish each function. We used a generic approach so that the process could be adapted at any level within DOD.

#### **Slide 5**

We then expanded the FAST diagram to identify the process for increasing the value of a generic Secondary Item. As an example, look at “How” to “Reduce Support Costs”. We will accomplish this by the functions of “Increase Reliability”, “Reduce Total Preventive Maintenance Time (TPMT)”, “Reduce Total Corrective Maintenance Time (TCMT)”, and/or “Reduce Administrative and Logistics Down Time (ALDT)”. This FAST diagram is not to the detail that we wanted, but we were limited by time. However, the soon-to-be U.S. Army Aviation and Missile Command (AMCOM) will complete this so that we have a properly defined process that will serve us in every case.

#### **Slide 6**

As you can see from this slide, the concerns of all the other MTS workshops are addressed by our FAST diagram. That is, in applying the process defined by this FAST diagram, we will address all administrative and technical areas that affect “Modernizing Fielded Systems” by “Increasing Secondary Items Value”.

#### **Slides 7&8**

Our final effort was to identify Issues and Concerns at the Major Subordinate Command (MSC) level relative to the actions/programs presently in place to accomplish MTS, e.g., Value Engineering, Supply Management Army-Operating and Support Cost Reduction (SMA-OSCR), Reliability, Maintainability and Serviceability (RM&S), Dual Use Applications Program (DUAP), Commercial Operating and Support Savings Initiative (COSSI), Saving Through Value Enhancement (\$AVE). It is the Team’s position that these issues and concerns can be resolved by a meticulous application of the MTS Process shown in the FAST diagram.

#### **Recommendations**

It is our recommendations that

- The MTS process as defined in our workshop be implemented at every level within DOD down to the MSC level
- At every level, a single organization with the weight and authority of the commander be responsible for the MTS process
- Integrated Product Teams, using the VE methodology, predominate in implementing the MTS program at all levels of DOD.